

Customer No.: 31561
Application No.: 10/707,299
Docket No.: 10660-US-PA

REMARKS

Present Status of the Application

Claims 1-15 remain pending in the present application of which claims 7 and 9 have been amended and claims 12-15 have been newly added to more explicitly describe the claimed invention. Furthermore, the abstract and the title of the invention have also been amended to overcome the objections of the Examiner set forth in the outstanding Office Action. It is believed that no new matter adds by way of amendments to claims or otherwise to the application.

For at least the following reasons, Applicants respectfully submit that claims 1-15 patently define over prior art of record and reconsideration of this application is respectfully requested.

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Discussion of the Objections to Specification

1. The Office Action objected the Abstract because the abstract exceeds 150 words in length.

In response there to, Applicants would like to thank the Examiner for pointing out the informalities and accordingly corrected the Abstract. Reconsideration is respectfully requested.

2. The Office Action objected the Title of the Invention for not being clearly indicative of the invention to which the claims are directed.

In response there to, Applicants would like to thank the Examiner for pointing out the informalities and accordingly amended the Title of the Invention. Reconsideration is respectfully requested.

Discussion of the claim rejection under 35 USC 102

1. The Office Action rejected Claims 1-11 under 35 U.S.C. 102(e) as being anticipated by Wang et al. (US-6,798,134, hereinafter Wang).

Applicants respectfully disagree and would like to point out that it is well established that rejections under 35 U.S.C. 102 requires that each and every elements of the rejected claim must be disclosed exactly by a single prior art reference.

Applicants respectfully submit that Wang cannot anticipate the proposed independent claim 1 because Wang substantially fails to teach or disclose each and every elements of the claimed invention as claimed in the proposed independent claim 1. More specifically, Wang substantially fails to teach or disclose an OLED comprising at least a

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first mixing layer formed over the anode layer, wherein a material of the first mixing layer is a mixture of a hole transport material and an electron transport material; a mixing layer formed on the first mixing layer; wherein a material of the mixing layer is a mixture of an organic light emitting material, the hole transport material and the electron transport material; and a second mixing layer formed on the mixing layer, wherein a material of the second mixing layer is a mixture of the hole transport material and the electron transport material] as required by the proposed independent claim 1. The advantage of the features recited above is that at least the charge accumulation issue at the hetero-junction interface can be effectively reduced and service life of the OLED can be effectively increased.

Instead, Wang, FIG. 1, and the whole disclosure, substantially discloses a light emitting device comprising a substrate 12, an anode 14 disposed on the substrate 12, a hole injection layer 15 disposed on the anode 14, a organic gradual layer 16 disposed on the hole injection layer 15 and a cathode 18 disposed on the organic gradual layer 16. However, Wang fails to even mention any first or second mixing layers composed of mixture of hole transport and electron transport materials over the anode 14 and the organic gradual layer 16 respectively. Thus, Wang cannot possibly anticipate the proposed independent claim 1 in this regard.

Therefore, it is clear that Wang substantially fails to teach or disclose an OLED comprising at least [a first mixing layer formed over the anode layer, wherein a material of the first mixing layer is a mixture of a hole transport material and an electron transport material; a mixing layer formed on the first mixing layer; wherein

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a material of the mixing layer is a mixture of an organic light emitting material, the hole transport material and the electron transport material; and a second mixing layer formed on the mixing layer, wherein a material of the second mixing layer is a mixture of the hole transport material and the electron transport material] as required by the proposed independent claim 1, instead Wang substantially teaches a hole injection layer 15 over the anode 14, but however Wang substantially fails to even mention any ADDITIONAL first and second mixing layers comprising a hole transport material and an electron transport material on the anode 14 and the organic gradual layer 16 respectively. Therefore, Wang fails to teach or disclose each and every features of claim 1 and therefore Wang cannot possibly anticipate the proposed independent claim 1 in this regard.

Because Wang fails to even mention any additional (first and second) mixing layers over the anode 14 and the organic gradual layer 16 respectively, and therefore, Wang cannot possibly teach the composition of the first mixing layer and the second mixing layer as claimed in claim 1 of the claimed invention.

Applicants respectfully submit that it is impermissible, however simply to engage in a hindsight reconstruction of the claimed invention using the Applicant's structure as a template and selecting elements from references to fill the gaps, and any such reconstruction to depreciate the claimed invention would be construed as hindsight reconstruction. Accordingly, the use of certain portions of the organic gradual layer 16 of Wang, by the Examiner, as equivalent of the First and Second mixing layers of the claimed invention as claimed in Claim 1 would be construed as hindsight reconstruction,

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which is possible only by using the Applicants' OLED structure as a template. Therefore, Wang cannot possibly anticipate claim 1 in this regard.

Furthermore, Applicants would like to point out that the organic medium with high electron affinity, for example metal complex of quinoline, quinoxaline and silole derivatives (col. 4, lines 25-32), which the Examiner interpreted to be light emitting layer, is in fact organic electron injection material. Therefore, Wang cannot meet claim 1 in this regard.

Furthermore, because the amended proposed independent claims 7 and the newly added proposed independent claim 12 also recite features similar to claim 1, in that Wang substantially fails to even mention any ADDITIONAL second mixing layer comprising a hole transport material and an electron transport material on the organic gradual layer 16, and therefore, the amended proposed independent claims 7 and the newly added proposed independent claim 12 also patently define over Wang for at least the same reasons discussed above.

Claims 2-6, 8-11 and 13-15, which directly or indirectly depend from independent claims 1, 7 and 12 respectively, are also patentable over Wang at least because of their dependency from an allowable base claim.

For at least the foregoing reasons, Applicants respectfully submit that claims 1-15 patently define over Wang. Reconsideration and withdrawal of above rejections is respectfully requested.

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CONCLUSION

For at least the foregoing reasons, it is believed that all the pending claims 1-15 of the present application patently define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

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